

ABSTRACT

A semiconductor memory cell and forming method thereof utilizes a vertical select transistor to eliminate the problem of a large cell surface area in memory cells of the related art utilizing phase changes. A memory cell with
5 the related art utilizing phase changes. A memory cell with a smaller surface area than the DRAM device of the related art is achieved by the present invention. Besides low power consumption during read operation, the invention also provides phase change memory having low power consumption
10 even during write operation. Phase change memory also has stable read-out operation.